

0280

#2

OIPE

RAW SEQUENCE LISTING

DATE: 01/02/2002

PATENT APPLICATION: US/10/016,505

TIME: 11:24:41

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\01022002\J016505.raw

ENTERED

SEQUENCE LISTING

```

4 (1) GENERAL INFORMATION:
C--> 5 (i) APPLICANT: Peter W. Laird, Cindy A. Eads and Kathleen D. Danenberg
6 (ii) TITLE OF INVENTION: PROCESS FOR HIGH THROUGHPUT DNA METHYLATION
7 ANALYSIS
8 (iii) NUMBER OF SEQUENCES: 54
9 (iv) CORRESPONDENCE ADDRESS:
10 (A) ADDRESSEE: Davis Wright Tremaine LLP
11 (B) STREET: 1501 Fourth Avenue
12 2600 Century Square
13 (C) CITY: Seattle
14 (D) STATE: Washington
15 (E) COUNTRY: USA
16 (F) ZIP: 98101-1688
17 (v) COMPUTER READABLE FORM:
18 (A) MEDIUM TYPE: Diskette-3.5 inch, 1.44 MB storage
19 (B) COMPUTER: PC compatible
20 (C) OPERATING SYSTEM: Windows 95
21 (D) SOFTWARE: Word 97
22 (vi) CURRENT APPLICATION DATA:
C--> 23 (A) APPLICATION NUMBER: US/10/016,505
C--> 24 (B) FILING DATE: 10-Dec-2001
25 (C) CLASSIFICATION:
26 (vii) PRIOR APPLICATION DATA:
27 (A) APPLICATION NUMBER: 09/311,912
28 (B) FILING DATE: May 14, 1999
29 (viii) ATTORNEY/AGENT INFORMATION:
30 (A) NAME: Barry L. Davison
31 (B) REGISTRATION NUMBER: 47,309
32 (C) REFERENCE/DOCKET NUMBER: 47675-9
C--> 33 (ix) TELECOMMUNICATION INFORMATION:
34 (A) TELEPHONE: (206) 628-7621
35 (B) TELEFAX: (206) 628-7699
36 (2) INFORMATION FOR SEQ ID NO: 1:
37 (i) SEQUENCE CHARACTERISTICS:
38 (A) LENGTH: 19 base pairs
39 (B) TYPE: nucleic acid
40 (C) STRANDEDNESS: single
41 (D) TOPOLOGY: linear
W--> 42 (ii) MOLECULE TYPE: DNA
43 (iii) HYPOTHETICAL: No
44 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
46 GCGGTTTCGTT TTGGGATTG 19
48 (2) INFORMATION FOR SEQ ID NO: 2:
49 (i) SEQUENCE CHARACTERISTICS:
50 (A) LENGTH: 24 base pairs
51 (B) TYPE: nucleic acid

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/016,505

DATE: 01/02/2002
 TIME: 11:24:41

Input Set : A:\PTO.VSK.txt
 Output Set: N:\CRF3\01022002\J016505.raw

```

52          (C) STRANDEDNESS: single
53          (D) TOPOLOGY: linear
W--> 54      (ii) MOLECULE TYPE: DNA
55      (iii) HYPOTHETICAL: No
56      (ix) FEATURE:
57          (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
58 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosphoramidite-cytosine);
59 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
60      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
62 CGATAAAACC GAACGACCCG ACGA      24
64 (2) INFORMATION FOR SEQ ID NO: 3:
65      (i) SEQUENCE CHARACTERISTICS:
66          (A) LENGTH: 19 base pairs
67          (B) TYPE: nucleic acid
68          (C) STRANDEDNESS: single
69          (D) TOPOLOGY: linear
W--> 70      (ii) MOLECULE TYPE: DNA
71      (iii) HYPOTHETICAL: No
72      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
74 GCCGACACGC GAACTCTAA      19
76 (2) INFORMATION FOR SEQ ID NO: 4:
77      (i) SEQUENCE CHARACTERISTICS:
78          (A) LENGTH: 23 base pairs
79          (B) TYPE: nucleic acid
80          (C) STRANDEDNESS: single
C--> 81          (D) TOPOLOGY: linear
W--> 82      (ii) MOLECULE TYPE: DNA
83      (iii) HYPOTHETICAL: No
84      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
86 ACACATATCC CACCAACACA CAA      23
88 (2) INFORMATION FOR SEQ ID NO: 5:
89      (i) SEQUENCE CHARACTERISTICS:
90          (A) LENGTH: 30 base pairs
91          (B) TYPE: nucleic acid
92          (C) STRANDEDNESS: single
93          (D) TOPOLOGY: linear
W--> 94      (ii) MOLECULE TYPE: DNA
95      (iii) HYPOTHETICAL: No
96      (ix) FEATURE:
97          (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
98 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosphoramidite-cytosine);
99 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
100      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
102 CAACCCTACC CCAAAAACCT ACAAATCCAA      30
104 (2) INFORMATION FOR SEQ ID NO: 6:
105      (i) SEQUENCE CHARACTERISTICS:
106          (A) LENGTH: 21 base pairs
107          (B) TYPE: nucleic acid
108          (C) STRANDEDNESS: single

```

RAW SEQUENCE LISTING

DATE: 01/02/2002

PATENT APPLICATION: US/10/016,505

TIME: 11:24:41

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\01022002\J016505.raw

```

109          (D) TOPOLOGY: linear
W--> 110      (ii) MOLECULE TYPE: DNA
111      (iii) HYPOTHETICAL: No
112      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
114 AGGAGTTGGT GGAGGGTGTT T      21
116 (2) INFORMATION FOR SEQ ID NO: 7:
117      (i) SEQUENCE CHARACTERISTICS:
118          (A) LENGTH: 18 base pairs
119          (B) TYPE: nucleic acid
120          (C) STRANDEDNESS: single
121          (D) TOPOLOGY: linear
W--> 122      (ii) MOLECULE TYPE: DNA
123      (iii) HYPOTHETICAL: No
124      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
126 CTATCGCCGC CTCATCGT      18
128 (2) INFORMATION FOR SEQ ID NO: 8:
129      (i) SEQUENCE CHARACTERISTICS:
130          (A) LENGTH: 22 base pairs
131          (B) TYPE: nucleic acid
132          (C) STRANDEDNESS: single
133          (D) TOPOLOGY: linear
W--> 134      (ii) MOLECULE TYPE: DNA
135      (iii) HYPOTHETICAL: No
136      (ix) FEATURE:
137          (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
138 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosphoramidite-cytosine);
139 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
140      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
142 CGCGACGTCA AACGCCACTA CG      22
144 (2) INFORMATION FOR SEQ ID NO: 9:
145      (i) SEQUENCE CHARACTERISTICS:
146          (A) LENGTH: 30 base pairs
147          (B) TYPE: nucleic acid
148          (C) STRANDEDNESS: single
149          (D) TOPOLOGY: linear
W--> 150      (ii) MOLECULE TYPE: DNA
151      (iii) HYPOTHETICAL: No
152      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
154 CGTTATATAT CGTTCGTAGT ATTCGTGTTT      30
156 (2) INFORMATION FOR SEQ ID NO: 10:
157      (i) SEQUENCE CHARACTERISTICS:
158          (A) LENGTH: 27 base pairs
159          (B) TYPE: nucleic acid
160          (C) STRANDEDNESS: single
161          (D) TOPOLOGY: linear
W--> 162      (ii) MOLECULE TYPE: DNA
163      (iii) HYPOTHETICAL: No
164      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
166 TTATATGTCG GTTACGTGCG TTTATAT      27

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/016,505

DATE: 01/02/2002
 TIME: 11:24:41

Input Set : A:\PTO.VSK.txt
 Output Set: N:\CRF3\01022002\J016505.raw

```

168 (2) INFORMATION FOR SEQ ID NO: 11:
169     (i) SEQUENCE CHARACTERISTICS:
170         (A) LENGTH: 22 base pairs
171         (B) TYPE: nucleic acid
172         (C) STRANDEDNESS: single
173         (D) TOPOLOGY: linear
W--> 174     (ii) MOLECULE TYPE: DNA
175     (iii) HYPOTHETICAL: No
176     (ix) FEATURE:
177         (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
178         (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosphoramidite-cytosine);
179         3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
180     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
182 CCCGTCGAAA ACCCGCCGAT TA      22
184 (2) INFORMATION FOR SEQ ID NO: 12:
185     (i) SEQUENCE CHARACTERISTICS:
186         (A) LENGTH: 19 base pairs
187         (B) TYPE: nucleic acid
188         (C) STRANDEDNESS: single
189         (D) TOPOLOGY: linear
W--> 190     (ii) MOLECULE TYPE: DNA
191     (iii) HYPOTHETICAL: No
192     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
194 GAACCAAAAC GCTCCCCAT      19
196 (2) INFORMATION FOR SEQ ID NO: 13:
197     (i) SEQUENCE CHARACTERISTICS:
198         (A) LENGTH: 25 base pairs
199         (B) TYPE: nucleic acid
200         (C) STRANDEDNESS: single
201         (D) TOPOLOGY: linear
W--> 202     (ii) MOLECULE TYPE: DNA
203     (iii) HYPOTHETICAL: No
204     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
206 GGGTTGTGAG GGTATATTTT TGAGG      25
208 (2) INFORMATION FOR SEQ ID NO: 14:
209     (i) SEQUENCE CHARACTERISTICS:
210         (A) LENGTH: 28 base pairs
211         (B) TYPE: nucleic acid
212         (C) STRANDEDNESS: single
213         (D) TOPOLOGY: linear
W--> 214     (ii) MOLECULE TYPE: DNA
215     (iii) HYPOTHETICAL: No
216     (ix) FEATURE:
217         (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
218         (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosphoramidite-cytosine);
219         3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
220     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
222 CCCACCAAC CACACAACCT ACCTAACC      28
224 (2) INFORMATION FOR SEQ ID NO: 15:

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/016,505

DATE: 01/02/2002

TIME: 11:24:41

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\01022002\J016505.raw

```

225      (i) SEQUENCE CHARACTERISTICS:
226          (A) LENGTH: 22 base pairs
227          (B) TYPE: nucleic acid
228          (C) STRANDEDNESS: single
229          (D) TOPOLOGY: linear
W--> 230      (ii) MOLECULE TYPE: DNA
231          (iii) HYPOTHETICAL: No
232          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
234 CCAACCCACA CTCCACAATA AA      22
236 (2) INFORMATION FOR SEQ ID NO: 16:
237      (i) SEQUENCE CHARACTERISTICS:
238          (A) LENGTH: 19 base pairs
239          (B) TYPE: nucleic acid
240          (C) STRANDEDNESS: single
241          (D) TOPOLOGY: linear
W--> 242      (ii) MOLECULE TYPE: DNA
243          (iii) HYPOTHETICAL: No
244          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
246 AACAAACGTCC GCACCTCCT      19
248 (2) INFORMATION FOR SEQ ID NO: 17:
249      (i) SEQUENCE CHARACTERISTICS:
250          (A) LENGTH: 18 base pairs
251          (B) TYPE: nucleic acid
252          (C) STRANDEDNESS: single
253          (D) TOPOLOGY: linear
W--> 254      (ii) MOLECULE TYPE: DNA
255          (iii) HYPOTHETICAL: No
256          (ix) FEATURE:
257              (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
258 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosphoramidite-cytosine);
259 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
260          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
262 ACCCGACCCC GAACCGCG      18
264 (2) INFORMATION FOR SEQ ID NO: 18:
265      (i) SEQUENCE CHARACTERISTICS:
266          (A) LENGTH: 22 base pairs
267          (B) TYPE: nucleic acid
268          (C) STRANDEDNESS: single
269          (D) TOPOLOGY: linear
W--> 270      (ii) MOLECULE TYPE: DNA
271          (iii) HYPOTHETICAL: No
272          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18
274 TGGGAATTTTC GGTGATTGG TT      22
276 (2) INFORMATION FOR SEQ ID NO: 19:
277      (i) SEQUENCE CHARACTERISTICS:
278          (A) LENGTH: 24 base pairs
279          (B) TYPE: nucleic acid
280          (C) STRANDEDNESS: single
281          (D) TOPOLOGY: linear

```

VERIFICATION SUMMARY

DATE: 01/02/2002

PATENT APPLICATION: US/10/016,505

TIME: 11:24:42

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\01022002\J016505.raw

L:5 M:220 C: Keyword misspelled or invalid format, [(i) APPLICANT:]
L:23 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:24 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:33 M:220 C: Keyword misspelled or invalid format, [(ix) TELECOMMUNICATION INFORMATION:]
L:42 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=1
L:54 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=2
L:70 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=3
L:81 M:220 C: Keyword misspelled or invalid format, [(D) TOPOLOGY:]
L:82 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=4
L:94 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=5
L:110 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=6
L:122 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=7
L:134 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=8
L:150 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=9
L:162 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=10
L:174 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=11
L:190 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=12
L:202 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=13
L:214 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=14
L:230 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=15
L:242 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=16
L:254 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=17
L:270 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=18
L:282 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=19
L:294 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=20
L:310 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=21
L:322 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=22
L:334 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=23
L:350 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=24
L:362 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=25
L:374 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=26
L:390 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=27
L:402 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=28
L:414 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=29
L:430 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=30
L:442 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=31
L:462 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=32
L:482 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=33
L:502 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=34
L:522 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=35
L:534 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=36
L:546 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=37
L:558 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=38
L:570 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=39
L:582 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=40
L:594 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=41
L:606 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=42
L:618 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=43

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/016,505

DATE: 01/02/2002

TIME: 11:24:42

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\01022002\J016505.raw

L:630 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=44
L:642 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=45
L:654 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=46
L:666 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=47
L:678 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=48
L:690 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=49
L:702 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=50